

## Summary

Medical Rhinoplasty has been these last years widespread with different techniques like

- fillers (permanent and not permanent) which can lead to necrosis, granulomas and nodules due not only to bad techniques but also to the physico chemistry of the fillers themselves, even if registered by Authorities like CE, FDA, or others.
- threads which can lead to deformities and some necrosis if copies of inventors products are used, if realized by not trained physicians, on in case of too many threads.
- sutures which are different of threads.
- botulinum toxin which leads to a severe atrophy of the muscles. (Much more it's used, less it works)
- The medical myoplasty of the nasal depressor septum technique called ENDOPEEL, even if it is not a peeling) which is conservative, without damaging any structures or functions of the nose and which needs to be repeated each 6 months. This technique has been realized since 18 years worldwide by trained facial plastic surgeons, plastic surgeons, cosmetic dermatologists and some aesthetic medicine practitioners and none side effects or complications has been reported until now.

## Introduction

The immediate chemical and medical rhinoplasty by using the techniques called Endopeel, which have like mechanisms of action a myotension, a myoplasty and a myopexy which duration does not exceed 6 months is a new weapon for dermatologists, plastic surgeons and well-trained aesthetic medicine practitioners wishing to be conservative and preservative without irreversible side effects.

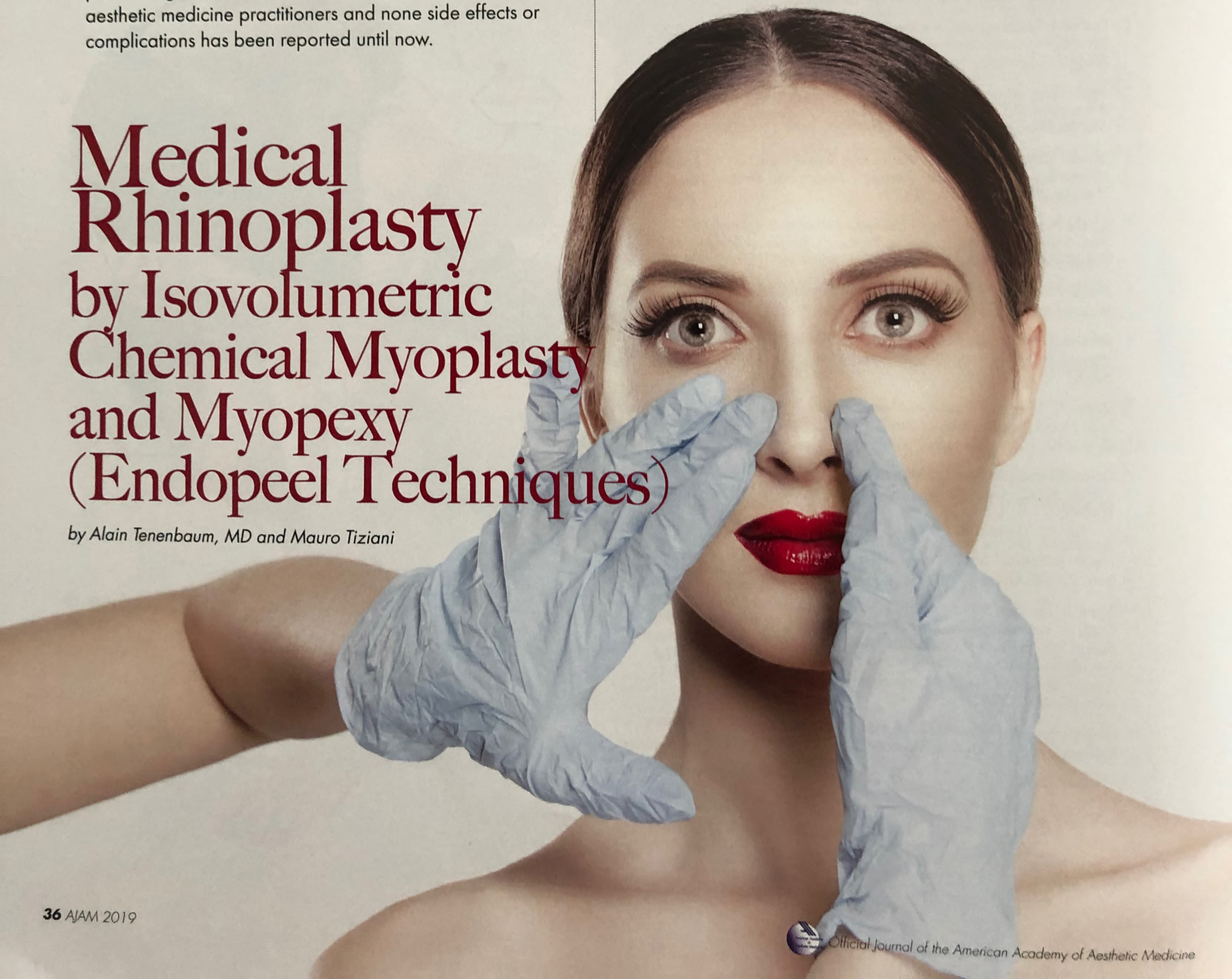
## Patients' selection

Endopeel techniques can be proposed to patients wishing to get a scarless immediate medical rhinoplasty without downtime, to patients who are not candidates or not ready for a surgical rhinoplasty, to patients which refuse suspension threads or elastic sutures.

The advantages of this technique of A. TENENBAUM are the immediate effect, the absence of scar, the absence of down time, the absence of social eviction, as the transitory complications which are very rare and limited only to short duration minimal edema (maximum 3 days).

# Medical Rhinoplasty by Isovolumetric Chemical Myoplasty and Myopexy (Endopeel Techniques)

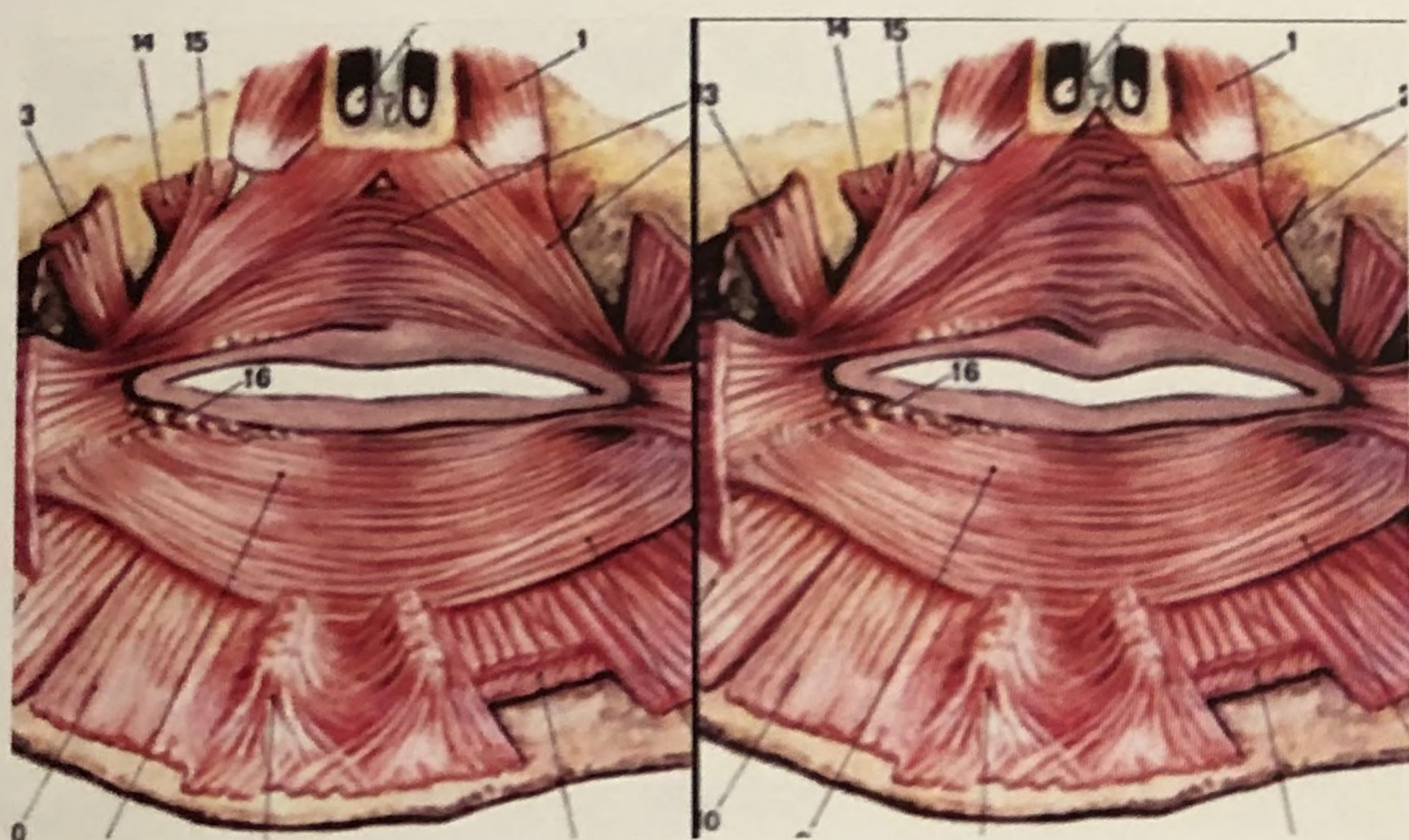
by Alain Tenenbaum, MD and Mauro Tiziani



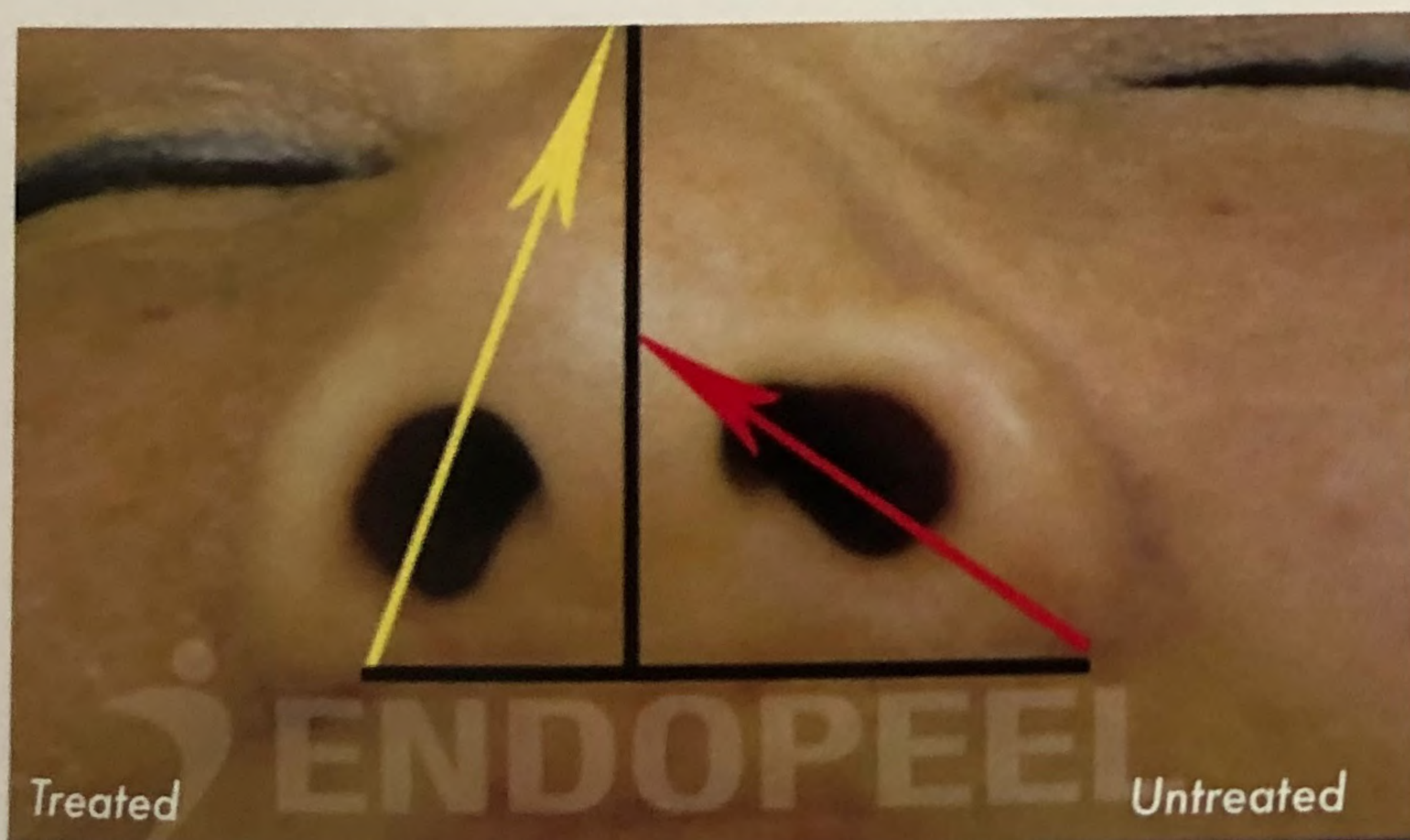




**Figure 1.** 30 minutes after 2 injections to lift up the nasal tip. Courtesy of Dr. Alain Tenenbaum.



**Figure 2.** Mechanisms of Endopeel Techniques on the depressor of the nasal septum Adduction of the lateral philtral bands and shortening of the triangle basis contributing to the lifting of the nasal tip.



**Figure 3.** Narrowing the nasal aisle can be obtained by 2 injections into the nasal aisle elevator. The direction of the nostril will change 30 minutes after the injection. Such indication is mostly requested by Asian as Black Patients. Right Nasal Aisle Treated. Courtesy of Dr. Alain Tenenbaum.



**Figure 4.** Narrowing the nasal aisle. Courtesy of Dr. Alain Tenenbaum.



**Figure 5.** Lifting of the nasal tip and Injection into the ligament of Pitanguy to work on the pyramidal muscle

### Indications

Only 3 indications are possible:

- the nasal tip lifting by injecting the nasal depressor of the septum (**Figure 1 & Figure 2**)
- the nasal aisles narrowing by injecting the nasal aisle elevator (**Figure 3 & Figure 4**)
- the projection and narrowing of the nasal pyramidal muscle by injecting the ligament of Pitanguy (**Figure 5**)

### Main Contra-Indications

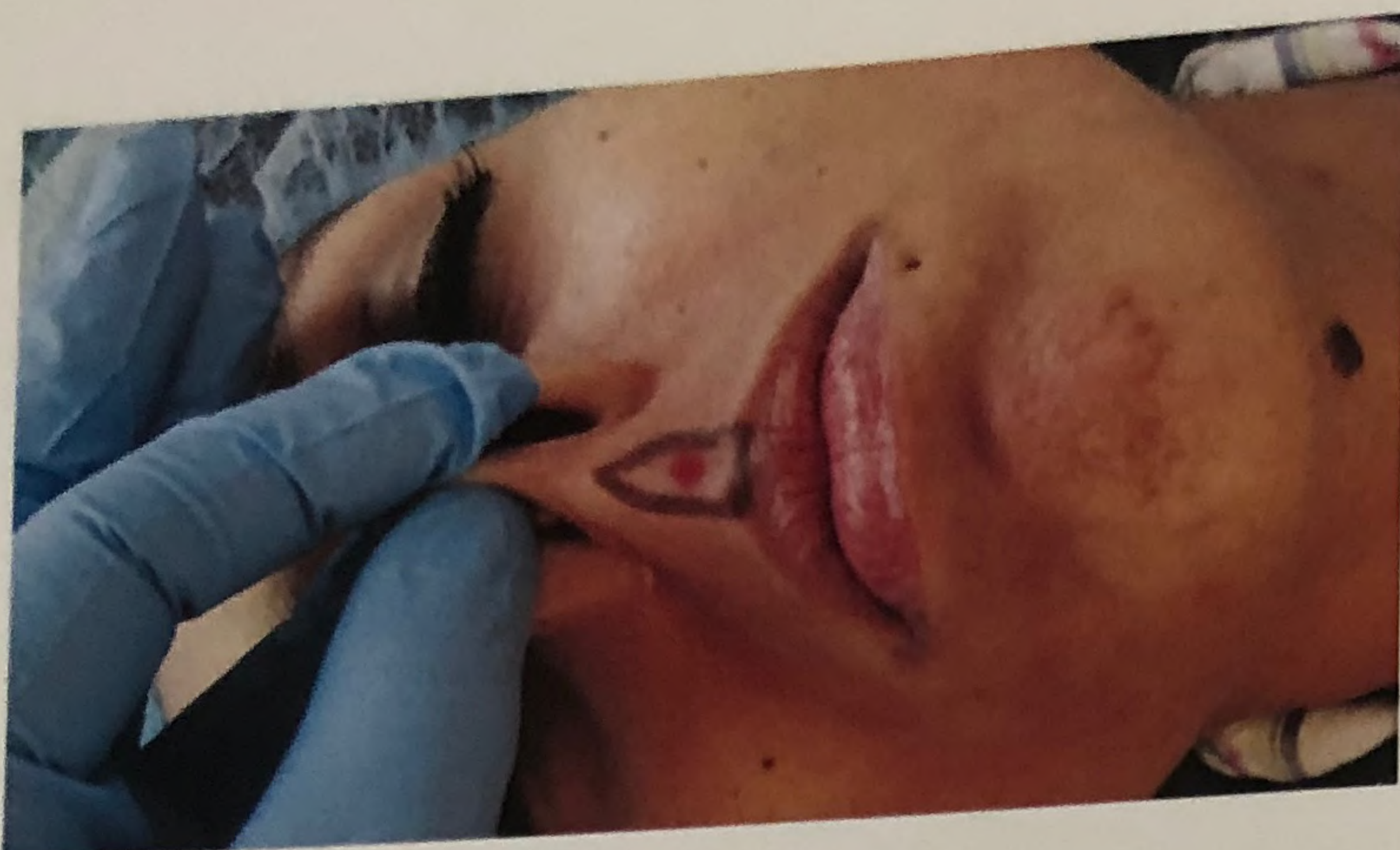
- nasal pathology
- pure indications of surgical correction
- allergy to arachides
- usual contra indications like: pregnancy, breast feeding, dysmorphophobia, surrealistic expectations,

### Material and Methods

The chemical patented mixture used for injection is made of carbolic acid and arachidonic acid. To reshape the nasal depressor of the septum, 2 injections of 0.15 ml have to be performed:

- 1st one normal to the barycenter of the philtral triangle, delimited by the philtrum bands laterally and the orbicularis oris as base of this triangle. (**Figure 6 & Figure 7**)
- the 2nd one at the top or roof of this triangle, where the philtrum bands are converging in one unique point, making

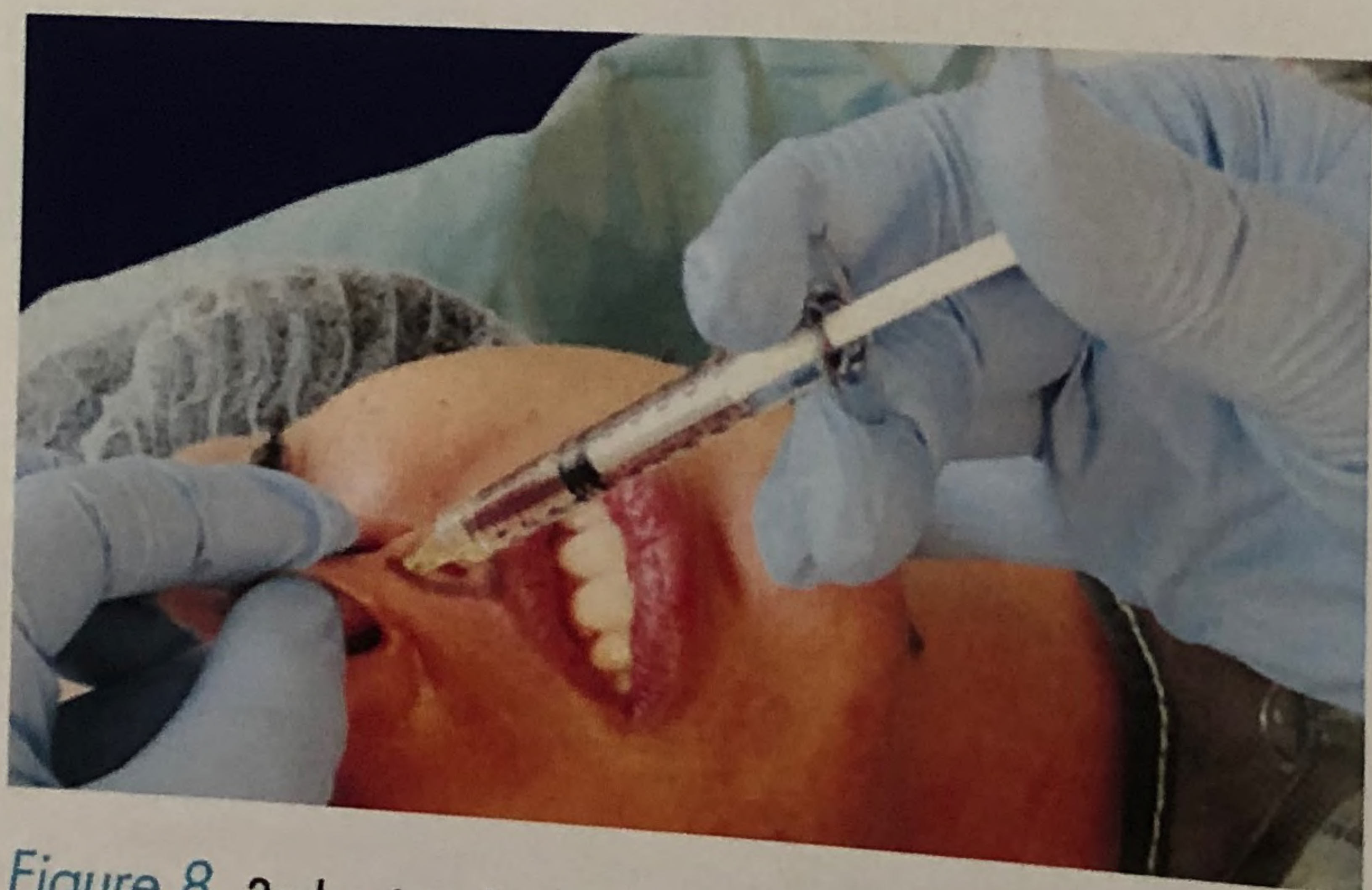




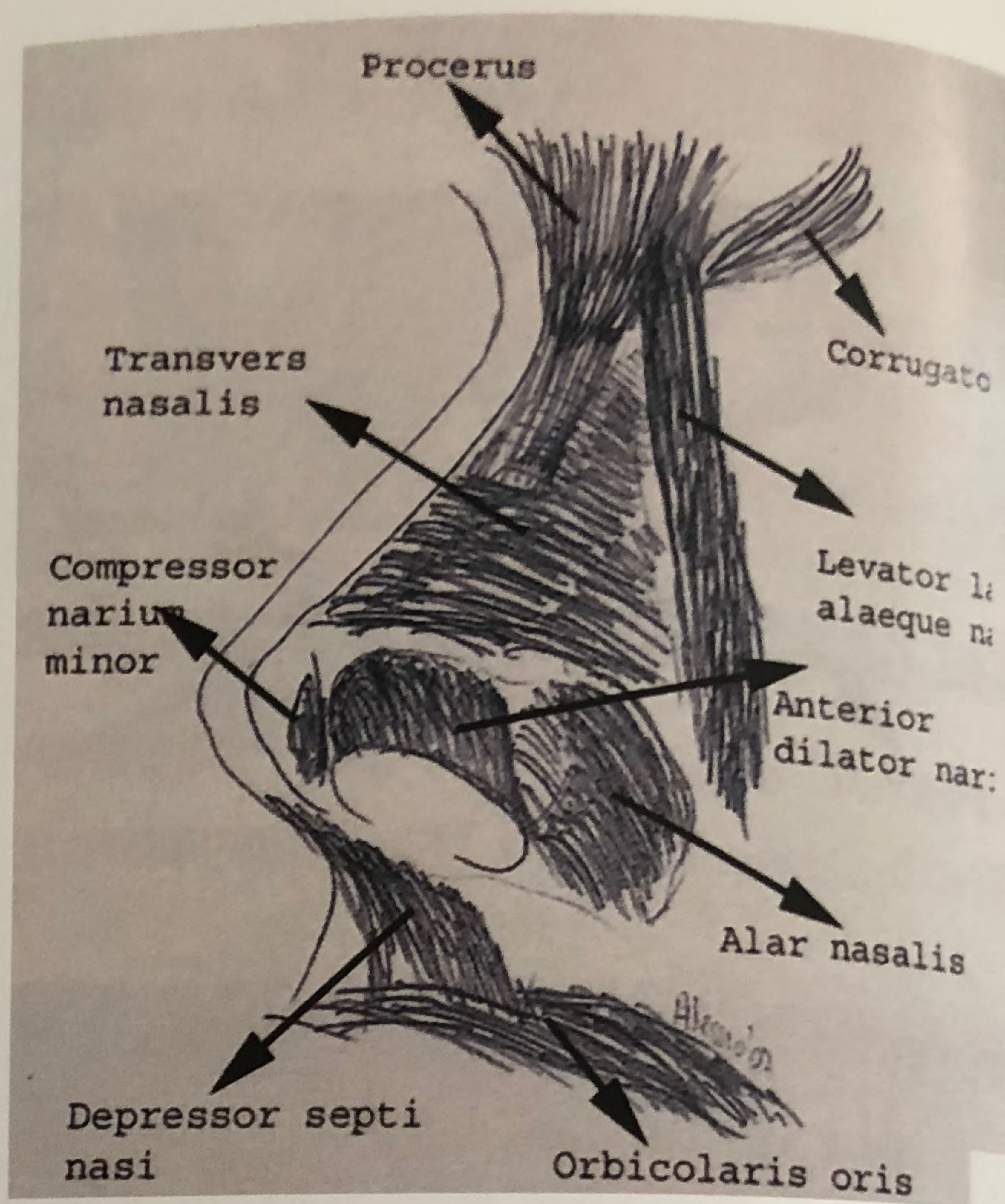
**Figure 6.** 1st point of injection (red point)  
It is the barycenter of the philtral triangle or the most declive point of the triangle. To find it easily, the position of the patient has to be in dorsal decubitus with head in hyperextension and you need to lift up with you 1st and 2nd finger of left hand the columella, which has to be parallel to the examination table. Then philtral lateral walls can be marked and the barycenter of the triangle is easy to see.



**Figure 7.** How to inject at 1st point of injection  
Left hand is important to maintain the columella parallel to the examination table Right hand is responsible of the injection – Needle 30g1/2-Syringhe 1ml luer lok. 0.15ml are injected.



**Figure 8.** 2nd point of injection. It has to be done at the intersection of the 2 philtral bands or at the top of the philtral triangle, with an angle of 30 grades between the syringe and the horizontal (parallel to the examination table). 0.15ml are injected.



**Figure 9.** Clinical Anatomy of the nasal muscles Courtesy of Dr. Alessio Redaelli.

3 muscles interest us in medical rhinoplasty with endopeel techniques. The depressor septi nasi or nasal septum depressor. The levator alaeque or nasal aisle elevator. The transvers nasalis or nasal pyramidal muscle.

an angle of 30 grades with the horizontal, to reach the little muscle at the bottom of the nasal septum.

(Figure 8 & Figure 9)

## Chemistry

Carbolic acid is completely different from phenol. Four differences need to be known by the physicians

- Resonance stabilization of the phenoxide anion by the aromatic ring. In this way, the negative charge on oxygen is shared by the ortho and para carbon atoms. That is why carbolic acid is used instead of phenol for endopeel techniques (which lead to medical liftings, obtained by chemical myoplasty, myopexy and myotension)
- Increased acidity is the result of orbital overlap between the oxygen's lone pairs and the aromatic system
- The dominant effect is the induction from the sp<sup>2</sup> hybridized carbons; the comparatively more powerful inductive withdrawal of electron density that is provided by the sp<sup>2</sup> system compared to a sp<sup>3</sup> system allows for great stabilization of the oxyanion.
- The pKa of carbolic acid is 6.6 and the pKa of phenol is 9.95



## Molecular Biology (written exclusively by M. Tiziani)

Carbolic acid is a molecule with a low molecular weight, composed of a benzene group and a hydroxyl, the latter with an unstable hydrogen atom, where the only electron, is far from the nucleus, undergoing its strong influence, not having other electrons that shield the nucleus. The carbolic acid is combined and conditioned by the arachidonic acid, that under stereospecific conformations, provides a strong energy margin to the hydroxyl of carbolic acid. The complex in general is amphipathic, having a hydrophobic and a hydrophilic part, the complex is not soluble in water. Functional hydrogen, both of the carbolic and of the arachidonic, and the double bond arachidonic ester group, they have the overall tendency to bind to water molecules, that break their bonds by forming new ones, from these results a high quantity in terms of energy, in an endergonic and exergonic functions, this energy partly transfers into macromolecular mechanism, synthesis and cell signaling, and part is released in heat. The hydrogen of the hydroxyl bound to the carbolic acid is unstable, the electron is highly excited, and does not have a specific stable positioning, where the trend, on contact with other reactive compounds or particles, it is the liberation of the electron from the trajectory around the atom. The merger and the instantaneous accident between different particles, energetically charged, emit an energetic quantity, where hydrogen loses its electron and becomes proton.

According to the scheme:  
 **$H=H+(\text{proton})+e-(\text{electron})$**

This is the bioenergetic cycle of endopeel, through the plasma membrane, through ion channels and protein receptors. Hydrogen of the carbolic acid hydroxyl group, it is coming into contact with the extracellular and cellular factors of the organism, keep an unstable form for a short time. Very soon it is acquired by the ionic channels or from transmembrane protein complexes, scattered, these, on the surface of the extracellular plasma membrane, available for the first contact with the endopeel complex. The transmembrane action potential is an electrochemical gradient process, composed of electron particles, process that is conducted through protein and lipid factors, which make up the plasma membrane. On protein receptors, as in ionic channels, where the signals come from external factors, they are processed and transformed into specific reporting factors. According to this principle, the signals coming from the outside, they are processed and modified based on compatible parameters, with the organization and the cellular mechanisms. The unstable electron of the carbolic acid hydroxyl group, under the attack of the transmembrane action potential, also composed of electrons, realizing a collision by coming into contact between charged particles, traveling the particles of the carbolic

acid with respect particles to the action potential, in different directions according to different speeds, freeing a fundamental part of energy, in such quantity according to the trajectory and to the speed of the particles.

According to the environmental characteristics, within, which the reaction is realized in the organism (temperature, reactive agents, three-dimensional conformations of macromolecules, quantity of oxidative components, also in the form of toxins, waste of oxidative metabolism, level of hydration in the system, structural state of matter).

The result between the collision of two or more electrons, where the amount of energy is released, where a substantial part is captured by the nucleus of the hydrogen proton ( $H^+$ ). The greatest quantity of energy is always captured by the nearest matter, in this case the nucleus of the proton ( $H^+$ ). Hydrogen is the most specific atom for energy transport and the most versatile in energy transformation processes, through movements, transformations and recombination of molecular factors. Changes in the energetic aspect when it turns into ion, changes current situations by modifying molecules and macromolecules, breaking existing ties and creating new ones. When the organism gets old its metabolism slows down, and a sufficient amount of energy is missing, when the organism's construction and repair plan it requires an amount of energy, to face an organizational and complex plan.

The organism will have to resort to an energy saving plan, preparing a plan for the reconstruction or repair of tissues approximate, based on the amount of energy available from the metabolic cycles. With age, the tissues acquire a poorer and less complex reconstruction and repair, they become less resistant, less elastic, subject to every least traumatic situation, it is the decadence of all energy parameters.

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Always our complex organism, that derive energy through the oxidation of nutrients, known hydrogen as a versatile atom for transport and maintenance of an energetic gradient. With endopeel, fundamental it is the hydrogen of carboxylic acid, maintained in a stable situation within its molecular composition, until it is used during antiaging treatments, where the hydrogen of the hydroxyl group of the carboxylic acid is released, to carry out his useful work in the contribution of an energetic quantity, available for:

- Transformed into proton, with a high quantity of energy, it propagates like a wave in the cellular organism, going to position itself on the oxidative factors deposited, on macromolecular complexes, on DNA chains and so on. Where it creates a hydrolysis of these factors, turning them into water. Easily understood by the fact, that subsequently the tissues treated with endopeel will be much more hydrated.
- An energy supply necessary to carry out a complete reconstruction or repair of tissues.
- In those situations where oxidative factors inhibit DNA chain the coding of information necessary for the functionality of the organism.
- In those situations where cellular damage, not easy repairable, it can be due to epigenetic mutations, where the mutations are within a stable equilibrium, that can be upset by an energy shock which bring the cell into apoptosis.

## Results

We assist to a philtral triangle base shortening and lateral sides adduction after the two injections described above. (Figure 10)

It results:

- that the philtrum from bidimensional gets tridimensional with a nice depression at its center (Figure 5)
- an improvement of the cupid bow
- an improvement of the vermillion
- the naso labial distance and nasal angles are improved (Figure 11)
- The orbicularis oris follows the depressor septi by myoplasty and myopexy due to its muscular insertions causing too a lifting of the upper lip. (Figure 12)

## Discussion

The contraction of the nasal septum depressor increases the nasal tip rotation towards down and makes it hanging down during the smiling, giving too a thin upper lip aspect.

Using Endopeel methods, we will get immediately and for 6 months duration in 62% of cases if the techniques are well done, a nasal tip lifting with an upper lip discreet lifting too.

A naso labial break could lead to a non-satisfactory result. In such case a VY plasty has to be performed.

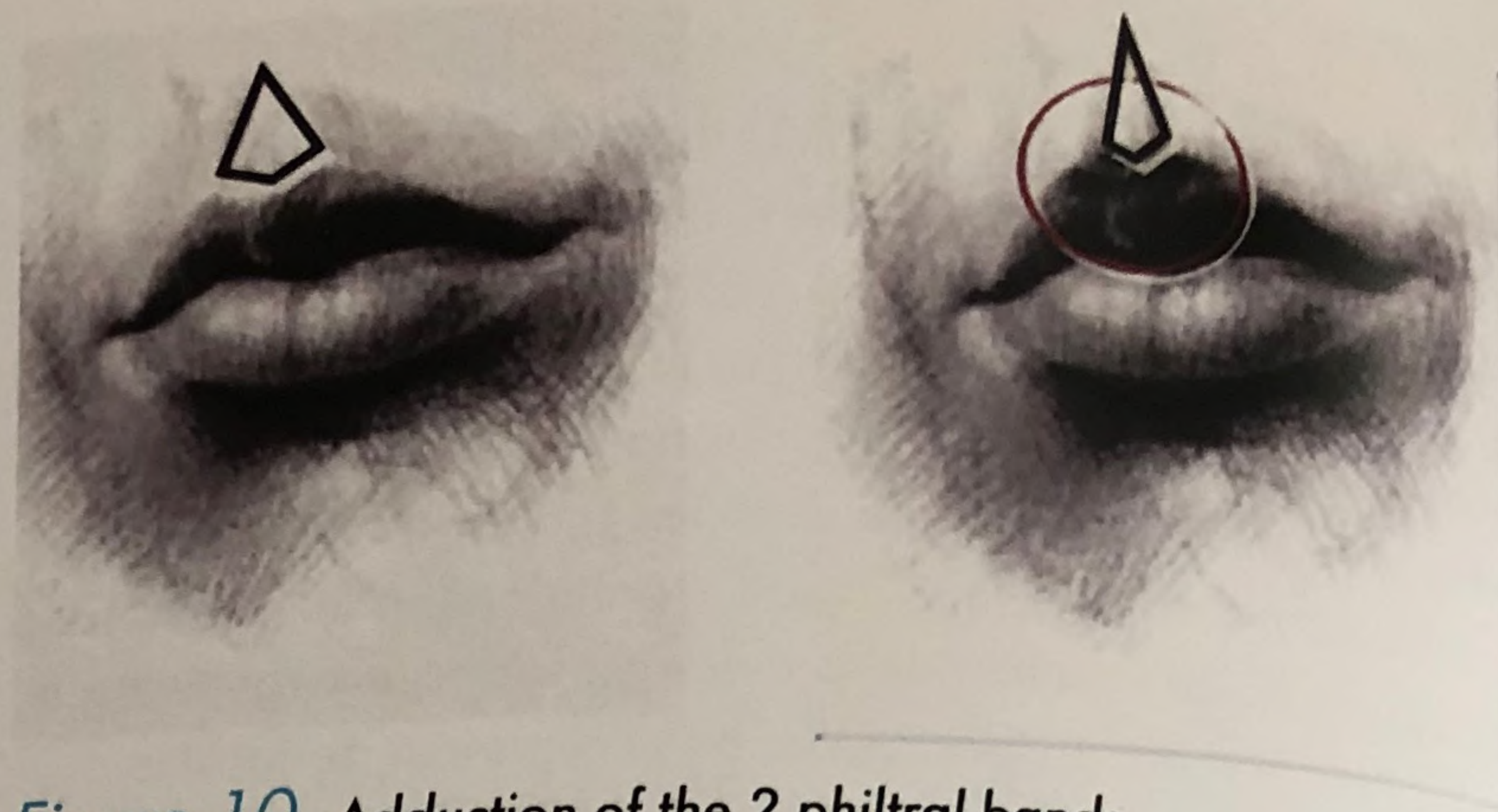


Figure 10. Adduction of the 2 philtral bands

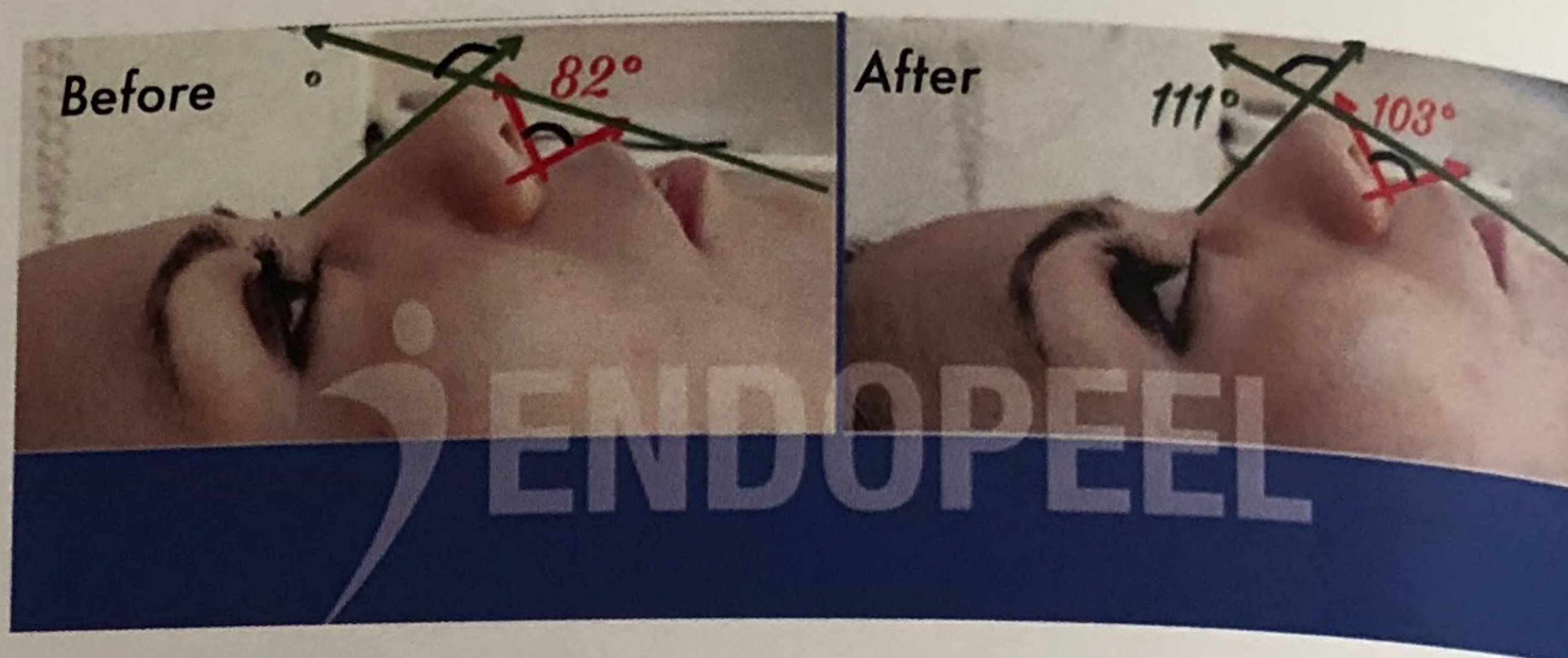


Figure 11. Nasal angles and naso labial distance after Endopeel techniques applied to the nose. Courtesy of Dr. Saba

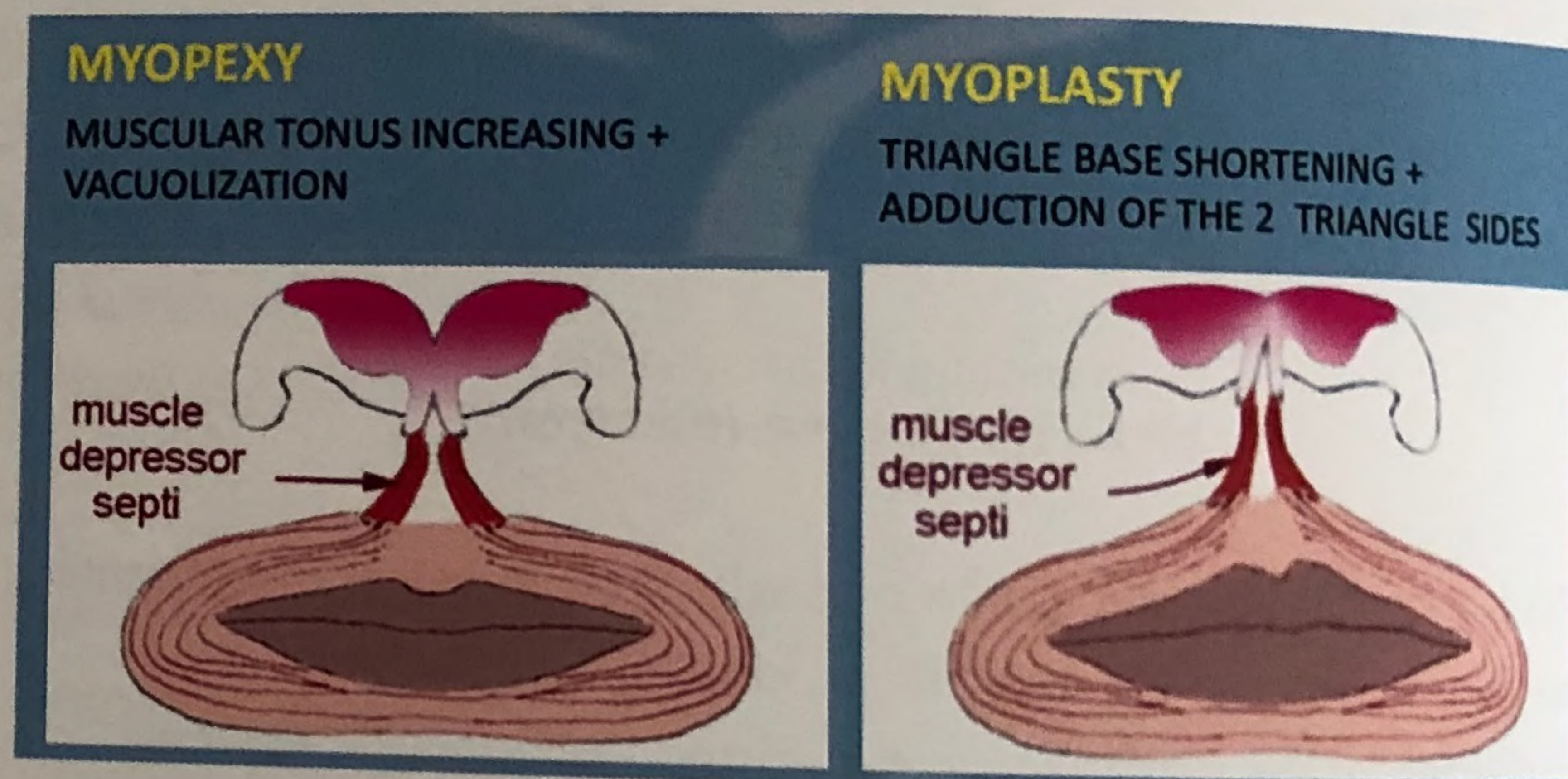


Figure 12. The orbicularis oris follows the depressor septi by myoplasty and myopexy due to its muscular insertions causing too a lifting of the upper lip

But unpredictable is the absence of results in the Type III of Rohrich. Consent Inform should clearly mention that 16% of them are Type III, leading to no results even if techniques are well performed!

## Conclusion

The safest weapon to perform medical rhinoplasty are the endopeel techniques because of

- No risks of necrosis, even in case of bad technique and unknowledge of anatomy
- No risks of granulomas, migration or nodules as it is not a filler
- No risks to damage cartilages as Endopeel Techniques are else than threads and/or sutures





Such techniques have the best rate benefits/price and can be performed on all skin types in any seasons and need maximum 7 seconds if trained to realize it.

The results are seen after 1/2 hour with a duration of 6 months and just in 16% of cases there are no results.

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#### **Keywords:**

endopeel, chemical myoplasty, chemical myopexy, retensado cutaneo, medical rhinoplasty, rhino tip, philtral triangle, nasal septum depressor, orbicularis oris, vermillion, naso labial, upper lip lifting, preservative rhinoplasty, non-surgical rhinoplasty.

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#### **Conflict of Interest**

The authors are the inventors of such techniques. No commercial name is mentioned in this article.



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